CASTLEMAINE NATURALIST 24

Helichrysum viscosum

MAY 1978

President: Mrs R. Mills
Min. sec: Mrs B. Singleton
Gen. sec: Mr M. Winterbottom
Treas: Mr L. Bransgrove.

General meetings are held at the Castlemaine Education Centre (SEC Buiding, Mostyn St) at 8 p.m. on the second Friday.

Visitors and prospective members are invited to attend the Club's sessions. Excursion details are printed on the rear page.

Orchids of the Castlemaine District Number 16 of a series

PURPLE DIURIS Diuris punctata by R. Mills

As a plant of the grasslands, Purple Diuris is becoming increasingly rare, and this is what has happened in this area.

The one illustrated came from private land at Sutton Grange. So far the sheep had been kept from the area at growing and flowering time.

The plant, about 30-45 cm high, is variable in colour, from deep purple through mauve, blotched white and even pure white, but the specimen illustrated was blue-mauve with a streaked effect. The length of the long lateral sepals varies from 2½ cm to 9 cm. Those illustrated would be about 5 or 6 cm.

It has long narrow leaves, and several flowers to each stem.

PRESERVING BASKET FUNGI

Mrs E. Courtney of the Maryborough FNC reports that Basket Fungi have been successfully preserved by washing, after which a balloon is placed inside and inflated. The ballon is removed when dry.

THE RED KANGAROO = AN ADVANCED MAMMAL

Kangaroos, being marsupials, are often regarded as primitive animals. Recent research shows, however, that they are rapidly evolving and successful animals and are better adapted to dry harsh conditions than many of the recognised desert animals from other parts of the world.

Over the past 10-15 million years, Australia has had a considerable increase in dry grasslands, and an increase too in the number and diversity of kangaroos and wallabies. This time, although long by human standards, is very brief geologically.

Reproduction

In the Red Kangaroo, pregnancy lasts for 33 days, only two days less than the length of the female estrous cycle. The joey weighs only 0.8 gram at birth. On birth, it climbs into its mother's pouch and does not leave permanently for another 235 days, although it may continue to suckle after this. Mating usually occurs immediately after birth, but the embryo remains dormant while the previous joey is in the pouch. Thus the mother may have three offspring - an undeveloped embryo, one in the pouch and larger young-at-foot still suckling, so that the population is capable of rapid increase.

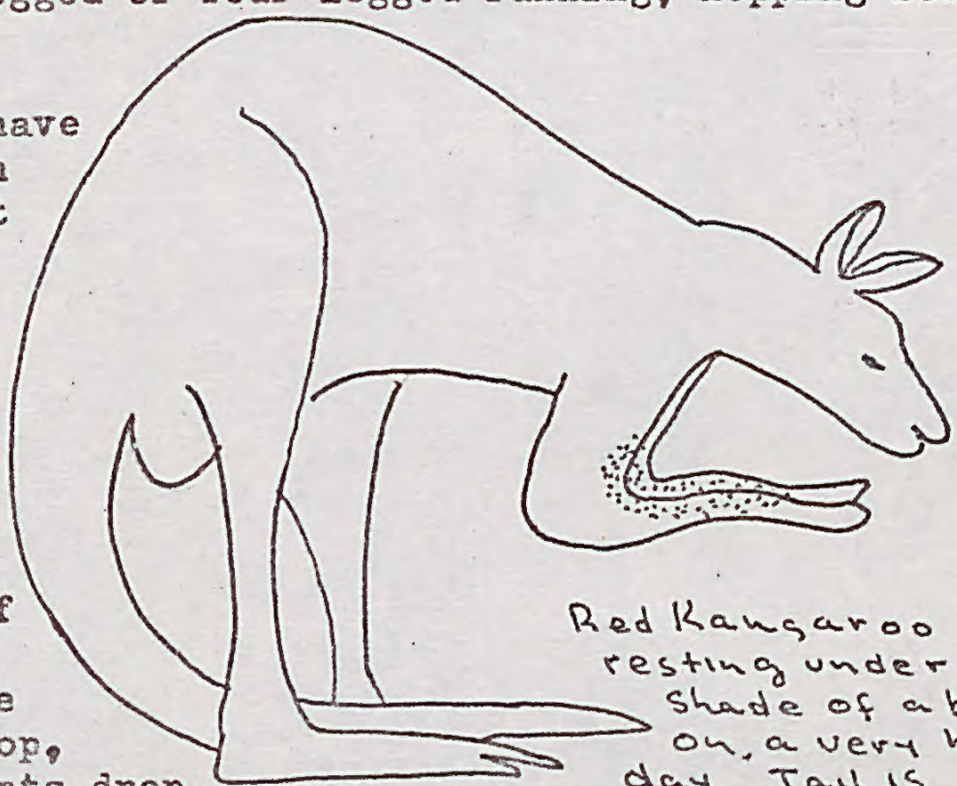
During a drought the oldest joeys die first when the milk supply dries up - the marsupial reproduction is an advantage here. As well, new babies are produced very quickly.

Movement

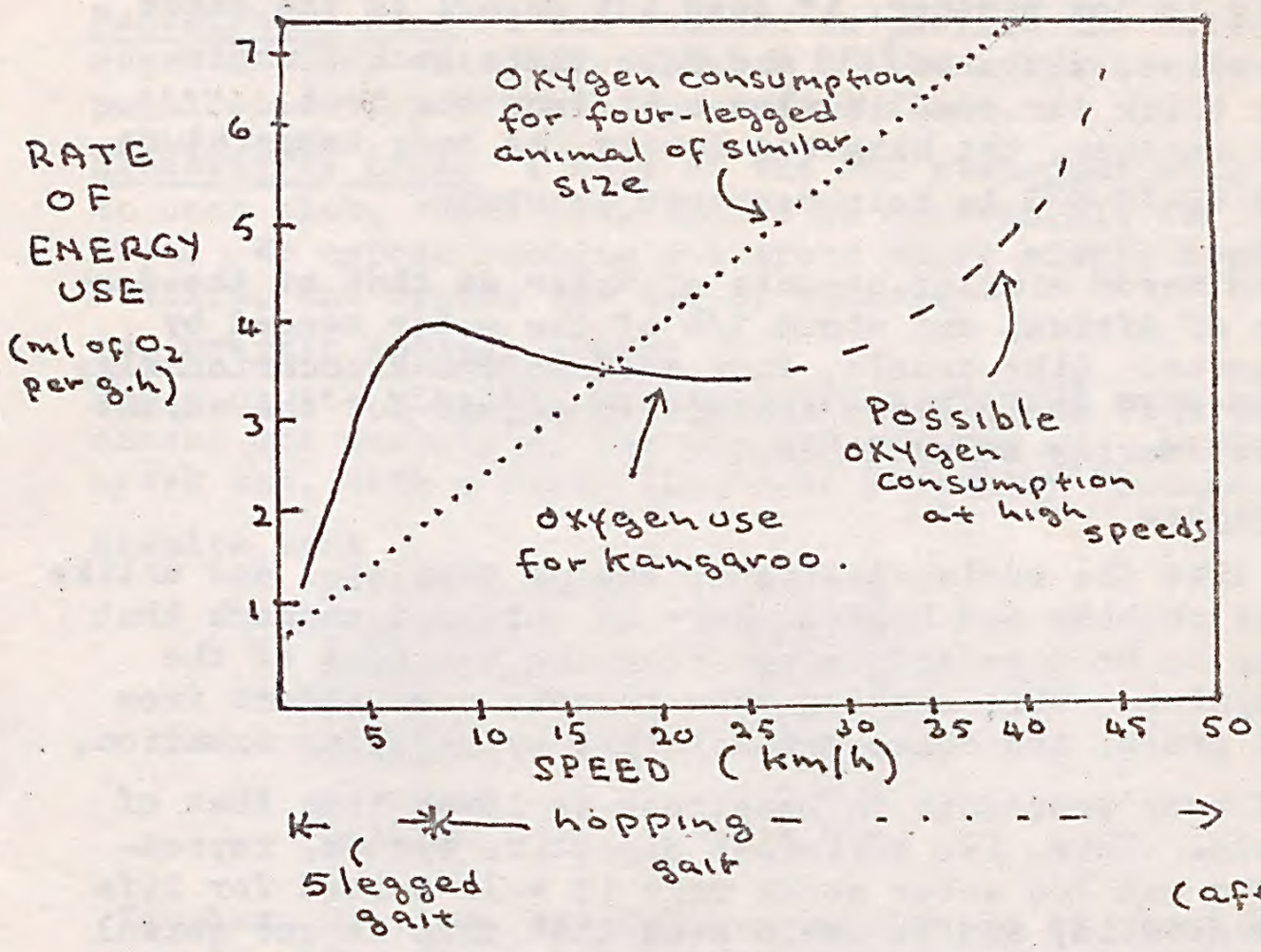
To us, used to two-legged or four-legged running, hopping seems to be an inefficient method of movement. Recently, kangaroos have been taught to hop on a large treadmill, at the same time their oxygen use rate has been measured.

Up to 5 km.p.h the kangaroo moves on five "legs"- (tail, hind and fore limbs) and this is a very inefficient method of movement.

At higher speeds, the kangaroo begins to hop, and energy requirements drop slightly. This is quite different



Red Kangaroo resting under the shade of a bush on a very hot day. Tail is placed under the body. Fore-limbs are licked. (after Dawson)



to the situation with four-legged motion where the energy needed increases steadily with increasing speed. Our two-legged motion is much less efficient than four-legged motion and we run at speed only by using very large amounts of energy.
For a kangaroo, the most economical speed is at about 25 km.p.h, when the hopping rate is about 14 per minute and the hop length is 2-3 metres. At this rate it uses only about 2/3 the energy used by a running animal of the same size. Speeds above 35 km.p.h. are more tiring for the kangaroo. As speeds increase, the hop length increases until about 35 km.p.h; after this speed hopping rate also increases.

Temerature Regulation

Kangaroos have perhaps the best and most efficient temperature regulation system of any animal. At rest, they pant to cool themselves. During excercise they also sweat, but this ceases as soon as exercise ends.(Sweating is wasteful of body moisture, as it cools the outside of the body which is reheated by the hot surroundings). There is a dense network of bloodvessels in the tail and forelimbs -in cases of heat stress the kangaroo will lick its fore-limbs-it has even been known during a chase to stop and do this.

When resting in hot weather, it does not sprawl in the shade but sits hunched, with its tail and fore limbs tucked underneath. Its thick fur coat insulates it from the heat. In very hot weather, the kangaroo lowers its body temperature at night by up to $4^{o}C$ to help conserve moisture.

Water Needs

The kangaroo needs similar amounts of water as that of the desert animals of Africa, and about 1/4 of the water needed by sheep and goats. Like camels, they need to drink occasionally, and can constrict their blood vessels to adjust for the amount of water lost during dehydration.

Digestive system

Kangaroos, like the ruminants (cows, sheep, deer etc) and unlike animals like rabbits and horses, have an enlarged stomach that allows grass to be digested before reaching the rest of the digestive system. This enables them to gain nourishment from low-protein grass, and conserves moisture by reducing excretion.

The rate of body processes in kangaroos is lower than that of other animals. This, its efficient digestive system, reproductive system and low water needs make it well suited for life in inland Australia, and it would seem that this is one animal capable of surviwing despite man. However, the effect of sheep in parts of Western Australia has caused the nature of the vegetation to change, and the green grass eaten by kangaroos to disappear, and to be replaced by spinef x. In such areas, the once common Red Kangaroo is now rare.

Reference: Australian Animals and Their Environment; Ed Messell and Butler; Skakespeare Head Press.

WVFNCA GENERAL MEETING REPORT

Coming Campouts

Warrnambool Aug 26-27, 1978. Sat afternoon: Choice of bushwalk or a beach walk. Evening: Barry Searle - topic: Snakes.

Ballarat/Snake Valley (5 km north of Linton) Oct 20-22. Camp at CEBS camp - accommodation etc available.

Portland Late October, 1979.

Natural History Medallion Association will support the nominations of Helen Aston and A. McGill.

Drooping Sheoke Denis Allan, 24 Bradley Lane, Warrandyte is seeking information about the distribution of Casuarina stricta.

Destruction of Wildlife Each club should follow Maryborough lead and collect statistics and information. Association will also protest to the Fisheries and Wildlife Department.

Beauglehole Fund It was decided to publish the Mallee area report. This will take about ¼ of the available funds, but publication may attract government funds.

Electricity Lines A copy of the SEC statement will be sent to each club. Each club should be responsible for its own area. We oppose rooting out trees where simple lopping would suffice, and oppose the use of poison.

THE MINERAL SPRINGS SURVEY

Those on the mineral springs tour on 23/4/78 were asked to assess the quality of the mineral springs . Leitch's creek won, with a clear lead over Tipperary Springs.

Results were

Leitch's Creek	86.3 %
Tipperary	72.1 %
Lyonville	66.7 %
Vaughan	64.4 %
Glenluce	58.9 %
Glenlyon	57.8 %
Coliban	28.9 %

Vaughan, Glenluce and Coliban were rated by about ½ of the people, (the first two not being on the route taken)

(Statistics supplied by G. Broadway. A spring receiving 5,5,4,3 votes would get a rating of 85%)

LAND CONSERVATION COUNCIL - ALPINE AREA RECOMMENDATIONS

The Castlemaine F.N.C. has received a copy of the above report. The Land Conservation Council now invites comments on the reccomendations, which have to be made no later than Monday June 12, 1978

The LCC proposes that a Alpine Reserve Council be formed to monitor the implementation of government land use and land management decisions, to advise and assist responsible authorities in carrying out their respective statutory roles and to integrate the activities of the various authorities.

Composition will be the chairman of the LCC (Chairman), chairman of the Soil Conservation Authority, Secretary for Lands, Chairman of the Forests Commission of Victoria and the director of the National Parks Service.

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Next Committee Meeting: Thursday May 26, at the Education C.
Newsletter Editor: E. Perkins.

NEW NAMES FOR PLANTS

The notes below, for local and other interesting plants is based on the article by A.C. Beauglehole, printed in the Victorian Naturalist of Mar/Apr 1978. For a full list, and authorities, refer to this article.

Acacia The Spreading Wattle is now A. genistifolia, not A diffusa. New species are A. cognata (was included in A subporosa) and A. nyssophylla (was included with A colletioides). Also, A. paucijuga becomes A. deanei ssp paucijuga and A botrycephala becomes A terminalis.(the Sunshine wattle). To complicate matters, the Cedar Wattle, formerly A. terminalis, is now A. elata.

Centaury The common Centaury is now Centaurium tenuifolium, not C. pulchellum.

Finger Flower This Whipstick plant is now Cheiranthera cyanea instead of C. linearis.

Parrot Peas The Smooth Parrot-pea is now recognised as two species The new species is Dillwynia ramosissima, and has spines; it is quite widespread in the district. The other species is D. glaberimma and has been recorded here.

Mountain Pepper The Mountain Peppers are common shrubs of the alps and are now in the genus Tasmannia.

Bluegums The names of these have now taken a full circle, the E. bicostata,E. St Johnii is now E. globulus ssp pseudoglobulus. Maiden's gum becomes E. globulus ssp maidenii.

Broom The name of these has again changed to Teline. Two species occur here, Montpellier Broom and Flax-leaf broom.

Cudweed Gnaphalium japonicum becomes G. gymnocephalum

Raspwort The genus is divided. The very common bushland herb, Haloragis tetragyna becomes Gonocarpous tetragynus
H. heterophylla remains.

Hakea Hakea vittata becomes H. tethrosperma.

Helichrysum The common Golden Everlasting of the local bushland is H, viscosum, not H. bracteatum.

Guinea flower Hibbertia australis of the Whipstick becomes H. stricta.

Kochia Genus becomes Maireana.

Kunzea K. muelleri becomes K. ericifolia.

Golden Pennants Loudonia behrii becomes Glischrocaryon behrii.

Luzula campestris A mixture of 10 species.

Apple Wild apple should be Malus X domestica.

Marianthus Local species is now Rhytidosporum procumbens.

Phebalium ozothamnoides becomes P. squamulosum ssp ozothamnoides.

Sorrel Rumex acetosella becomes Acetosa vulgaris.

Native Plantain Plantago varia is a mixture of species.

Tiegenopanax sambucifolius, the Elderberry Panax of the mountain forests is now Polyscias sambucifolia.

Fairies Aprons is a mixture of two species, one unnamed.

Diggers Speedwell Correct name is Parahebe perfoliata, not Veronica perfoliata.

Orchids

Small Duck Orchid is now Paracaleana minor (not Caleana minor)
Midge Orchid is not Prasophyllum nigricans, but an unnamed species.
Bearded Greenhood is now Pterostylis plumosa, not P. barbata.
Slender Sun-orchid, Thelymitra pauciflora, is a mixture of two species. The other is T. holmesii.
Scented Sun-orchid should be Thelymitra megcalyptera, not T. aristata ?

WHY CHANGE THE NAME?

The scientific names of plants are governed by strict rules which are accepted internationally. The basic rule is that the earliest valid name is the correct name.

Reasons for changes may be

(a) An earlier name is discovered. Australian plants have been collected by botanists from many countries, and original names given in obscure journals. As these are discovered, they become the correct name.
(b) Critical examination may show that an accepted species is actually a mixture of species, or that varieties may be separate species. Sometimes the reverse is the case, and several species are united.
(c) Plants with different names are shown to be the same species; This may happen if the species grows in widely separated localities
(d) A plant family is critically examined, when the first name (genus) may change. Usually the second name is unaltered. if this occurs.

At times, botanists do not agree about the correct classification so that there may be dispute too about the name.

CLUB PROGRAM

May Meeting Frid May 12
Speaker Mr R.D. Watkins, of Bendigo FNC.
Subject: The Himalayas

June Meeting Fri June 9
Speaker: Mr E. Perkins
Subject: Eucalypts

July Meeting Frid July 14
Speaker: Mr R. Smart
Subject: Fungi

August Meeting Fri Aug 11
Film night

FINANCIAL REPORT

Recent expenses have so reduced the bank balance that treasurer will be unable to pay all accounts if outstanding subsciptions are not paid.

If you have not yet paid your subscription for this year, please do so. Rates are

Single	$3
Family	$5
Junior	$1

The committee is also looking at ways of augmenting income. More at the meeting

May Excursion Fungi

Ridge Road, Elphinstone. Leave Ed Centre at 1.30 on Sat May 13.
Leader: Mr R. Smart.

June Excursion Local Eucalypts
Meet at the Ed Centre at 1.30 p.m. on Sunday June 11. Leader is E. Perkins.

July Excursion Muckleford Gorge
Leave the Ed Centre at 1.30 p.m. on Sat July 8th. Leader is L. Bransgrove.

October Excursion Lerderderg Gorge
Meet at Blackwood P.O at 11 a.m. on Sunday Oct
Leader is Mr W. Murphy.

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Arts Festival 1978

The committee suggests that the following might be suitable activities for this club

- guided(weekday) tour of the Muckleford bush.
- guided tours of Kaweka
- Mini- photoflora (as our Nov. meeting)
- Bus Tour to see Geology/ History of area.

The festival will be staged from Nov 3 - Nov 9

A MESSAGE FROM THE PRESIDENT Rita Mills.

I am sure that all of us were very pleased with the success of the W.V.F.N.C.A. campout. I certainly received many congratulatory comments. As several said, it was a big job for a young club, but as everyone worked willingly together, it made the job so much easier. I am sure we enjoyed the weekend just as much as our visitors, and surely that is what belonging to a Club really means.
My sincere thanks to everyone who took part in any way. I would like to mention names, but I'd miss someone for sure, because one is not always aware of what is being done in the background. I feel that everyone deserves thanks, whether "all they did" was to make guests feel welcome, or they worked hard at organisation. Thank you all.